

# *WILDFIRE*



Captain Gary Cummings

# ***WILDFIRE***



- **Montgomery County encompasses an area of approximately 325,000 acres.**
- **Over 93,000 is parkland. Farms and other private woods are not included.**



# *WILDFIRE*



- As a county we have had a few larger wildland fires, most notably the Darnestown Complex on February 11, 2011 which burned approximately 500 acres and damaged or destroyed numerous buildings. This fire severely taxed MCFRS resources.



# *WILDFIRE*



Large (>30acre) Laytonsville area BRUSH/WOODS FIRE, utilizing at least 10 engines, 8 water tankers, 12 brush trucks, MSP Helicopter



March 2018

WILDFIRE TRAINING

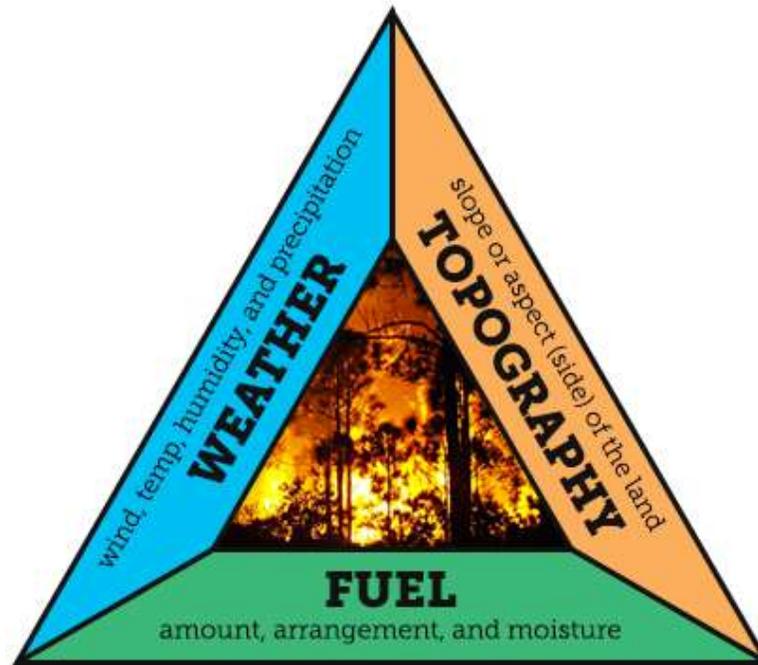
# *WILDFIRE*



- Wildfire Season  
September-April
- Usually Multiple Starts



# WILDFIRE



**Fire Behavior Triangle**

# *FUELS*



- Fuel Loading
- Continuity or Arrangement
- Moisture Content
- Ground, Surface or Aerial Fuel
- Structures



# *WEATHER*



- Wind
- Relative Humidity
- Temperature





# ***FIRE WEATHER WATCH***

- **Surface relative humidity (RH) less than 30 % for Maryland**
- **Sustained surface wind of 20 MPH or greater**
- **10-hour fuel moisture less than or equal to 8% for Maryland**



## ***RED FLAG WARNING***

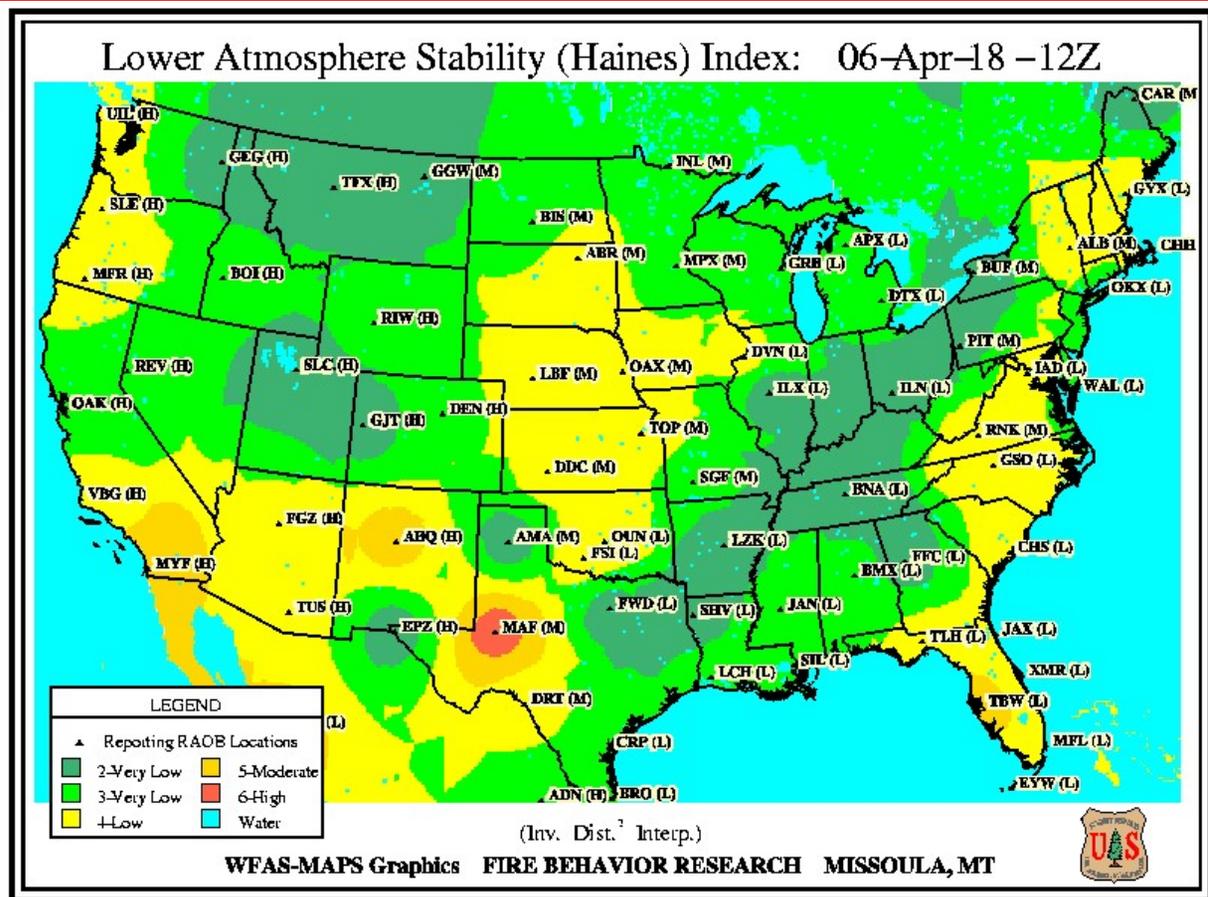
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- **10-hour fuel moisture less than or equal to 8% for MD**



## *HAINES INDEX*

- Haines Index (also known as Lower Atmosphere Severity Index) is a weather index developed by meteorologist Donald Haines in 1988 that measures the potential for dry, unstable air to contribute to the development of large or erratic wildland fires.
- The index is derived from the stability (temperature difference between different levels of the atmosphere) and moisture content (dew point depression) of the lower atmosphere.

# HAINES INDEX



# *TOPOGRAPHY*



- Slope
- Aspect
- Shape
- Barriers





# ***SAFETY-LCES***

**L-Lookouts**

**C-Communications**

**E-Escape Routes**

**S-Safety Zones**



# *L-LOOKOUTS*

- **Competent/Trusted Personnel**
- **Multiple If Needed**
- **Good Vantage/Safe Location**





# *C-COMMUNICATIONS*

- On Same Talkgroup
- Location Of Crews
- Briefing To Arriving Resources





# *E-ESCAPE ROUTES*

- **Two Ways Out**
- **Easy Path To Safety Zone**





# *S-SAFETY ZONES*

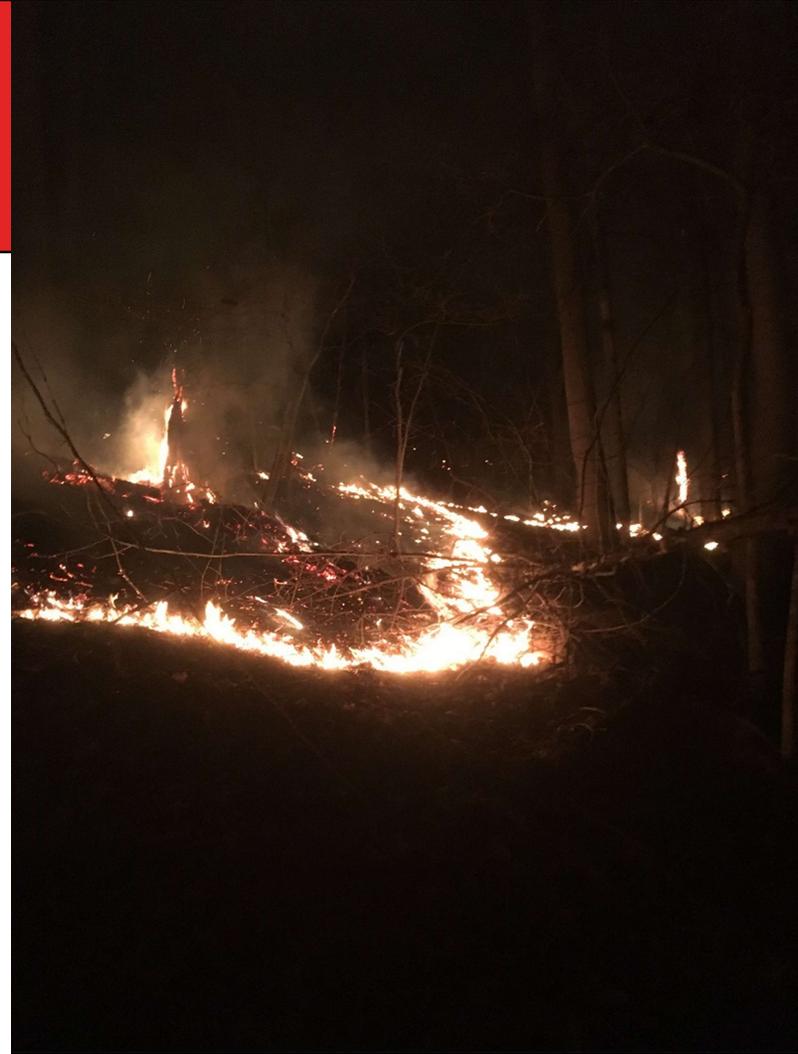
- Area Of Refuge
- Close Enough
- Large Enough



# *INCIDENT RESPONSE*

## Upon Dispatch Obtain:

- Fire Location
- Best Access
- Values Threatened
- Person Reporting the Fire
- Current Fire Weather Forecast
- Landowner, if Available
- Fire Cause, if Available





# *INITIAL ATTACK*

- **Size Up**
- **Establish Command**
- **Based on Resources:**  
**Holding Action,**  
**Evacuations, or Aggressive**  
**Initial Attack**



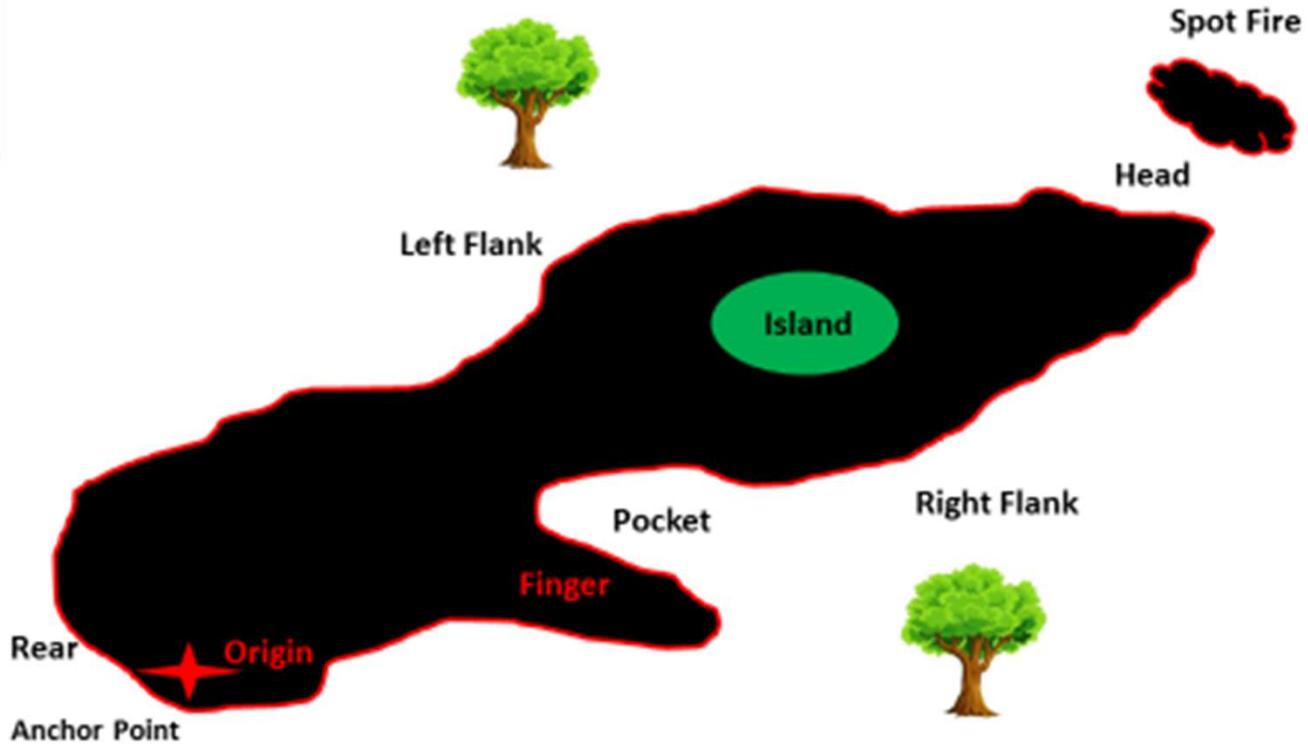


## *INITIAL ATTACK*

- **Direct Attack-** Related actions to cool, smother, starve, beat out or otherwise extinguish the flames. All control action directly against the fire edge.
- **Indirect Attack-** Control action conducted a variable distance from and usually parallel to the edge of a wildland fire in such a manner as to deprive the advancing fire of fuel and thereby halt its progress.



# Parts of a Fire



# *FIRE LINE CONSTRUCTION*



March 2018

**WILDFIRE TRAINING**

**Session 1**

# *FIRE LINE CONSTRUCTION*



# *FIRE LINE CONSTRUCTION*

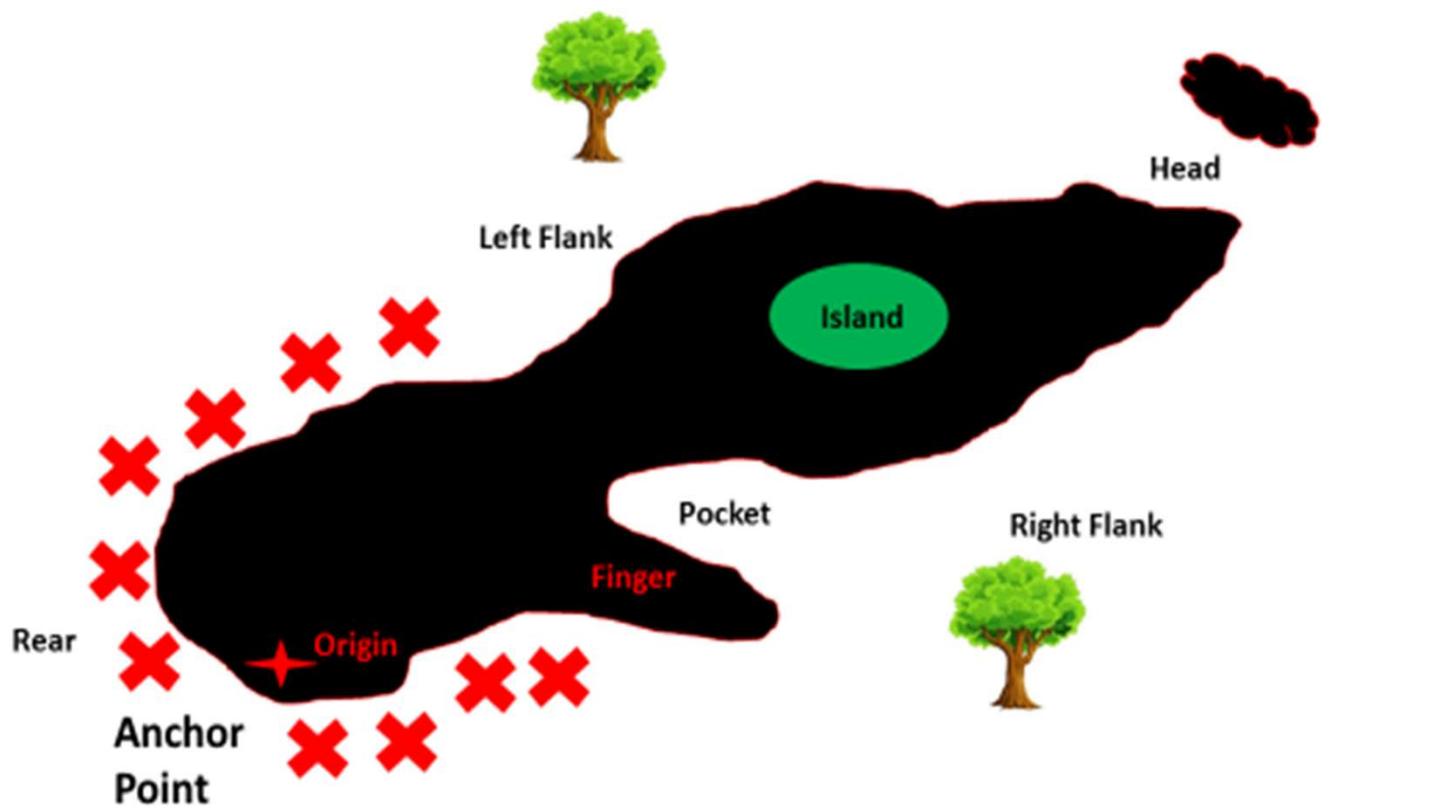


# *FIRE LINE CONSTRUCTION*



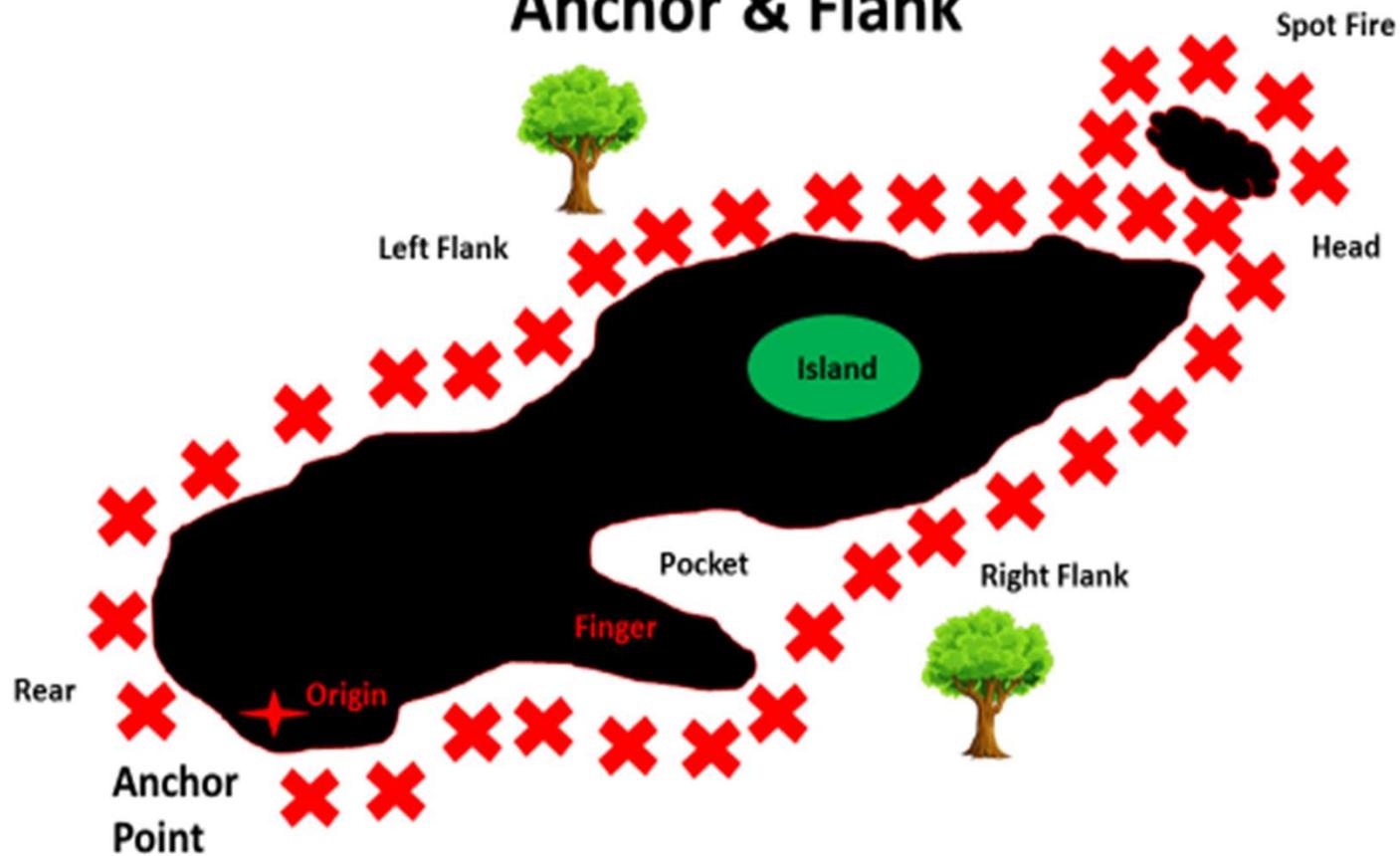


# Anchor & Flank





# Anchor & Flank



# *WILDLAND-URBAN INTERFACE*



[Return to Menu and Run Wildland Urban Interface Video](#)

# *MOP UP*

The process of making a controlled fire safe by extinguishing all remnants of fire within a specified strip adjacent to the control line. Many injuries and deaths occur during mop up. Stay Alert!





# A Firewise Home

## FIREWISE LANDSCAPING

### 1. Home Ignition Zone

Keep leaves and needles off your roof and deck. Create a fuel-free area within 3-5 feet of your home's perimeter. From 5 feet to a minimum of 30 feet out, thin and space vegetation, remove dead leaves and needles, prune shrubs and tree limbs. Keep areas around decks, sheds, fences and swing sets clear of debris and vegetation.

### 2. Landscaping and Firewise Plants

To prevent fire spread, trim back branches that overhang structures and prune branches of large trees up to 6 to 10 feet from the ground. Remove plants containing resins, oils, and waxes; make sure organic mulch is at least 5 feet from structures. Choose Firewise plants – find lists at [www.firewise.org](http://www.firewise.org) or from your local Cooperative Extension service.

## BE PREPARED

### 3. Disaster Plan

Develop, discuss and practice an emergency action plan with everyone in your home. Include details for pets, large animals and livestock. Program cell phones with emergency numbers. Know two ways out of your neighborhood and have a pre-designated meeting place. Have tools such as a shovel, rake, axe, handsaw, or chainsaw available, and maintain an emergency water source. Always leave if you feel unsafe – don't wait to be notified.

### 4. Emergency Responder Access

Identify your home and neighborhood with legible, clearly marked street names and numbers. Make your driveway at least 12 feet wide with a vertical clearance of 15 feet and a slope of less than 5 percent to provide access to emergency vehicles.

## FIREWISE CONSTRUCTION

### 5. Fire-Resistant Roof Construction

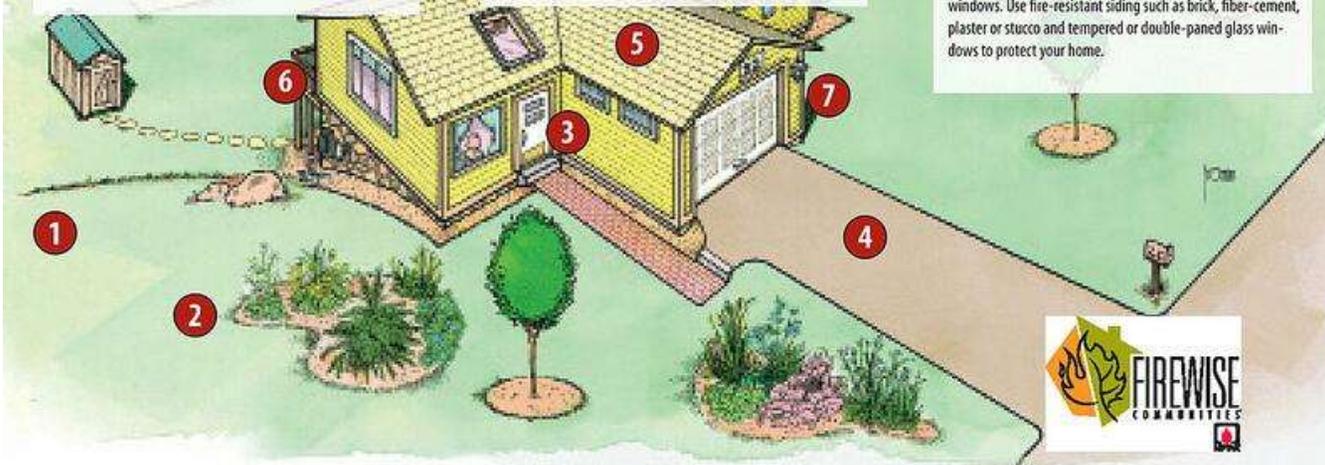
Use fire-rated shingles such as asphalt, metal, slate, clay tile or concrete products. A fire-resistant sub-roof adds protection. Box in eaves, but provide adequate ventilation to prevent condensation and mildew. Roof and attic vents should be screened to prevent ember entry.

### 6. Fire-Resistant Attachments

Any attachments to your home such as decks, porches, and fences must be fire-resistant. If not, your entire home is vulnerable to ignition.

### 7. Fire-Resistant Walls and Windows

Embers can collect in small nooks and crannies and ignite combustible materials; radiant heat from flames can crack windows. Use fire-resistant siding such as brick, fiber-cement, plaster or stucco and tempered or double-paned glass windows to protect your home.



Before coming to MCFRS, Gary Cummings served with the Larimer County Sheriff's Department, Fort Collins, CO- Yellow Jackets Wildland Fire Crew for five seasons.

He also was employed with the U.S. Fish and Wildlife Service- Red Rock Lakes National Wildlife Refuge, Lima, MT.

Gary has a bachelors degree from Colorado State University in Natural Resources Management, specializing in Wildland Fire

End of Presentation

